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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/009,714 | 12/27/2001 | John Clement Preston | WAT0120 | 4729 |

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SLACK, NAKO N

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| ART UNIT | PAPER NUMBER |
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3635

DATE MAILED: 11/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/009,714

Applicant(s)

PRESTON, JOHN CLEMENT

Examiner

Naoko Slack

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 2,4,5,11 and 12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3 and 6-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

In view of Applicant's Amendment A, claims 4 and 5 have been cancelled as requested, and claim 1 has been amended to incorporate subject matter from claim 2 and include a new feature regarding the spacing of spacers. The change in scope of claim 1 necessitated a new ground of rejection to remaining claims 1, 3, 6-8, and 10. Claims 2, 9, 11, and 12 have been previously cancelled.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 6-8 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 is drawn to a structural component "comprising two single components, each according to claim 1" (claim 6, lines 2-3). Claim 1 defines a single component to comprise five faces, formed by two angle-sectioned elements and two end plates. If the structural component of claim 6 comprises two single components of claim 1, there would be a total of four endplates. A structural member with four endplates is clearly neither disclosed nor illustrated in this application.

Similarly, Claim 10 is drawn to a structural component "comprising two single components, each according to claim 3" (claim 10, lines 2-3). Claim 3 depends from claim 1, and as stated above, claim 1 defines a single component to comprise five

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faces, formed by two angle-sectioned elements and two end plates. If the structural component of claim 10 comprises two single components of claim 3, which depends from claim 1, there would be a total of four endplates. However, a structural member with four endplates is clearly neither disclosed nor illustrated in this application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 2,114,901 to Henderson in view of US Patent 1,850,118 to Meyers.

Claim 1:

Henderson discloses a structural component having five substantially planar faces, the component comprising two identical, elongated angle-sectioned elements (80, Figure 82), two end plates (82, Figure 82) extending from one end of an angle-sectioned element to the second angle-sectioned element, and a plurality of spacers (83, Figure 82 and 3, Figure 4) extending between angle-sectioned elements and welded (page 2, column 2, lines 7-9) to coplanar side flanges of the angle-sectioned elements. The edge and side faces of the angle-sectioned elements and the end plates are punched with to accommodate fastening means. Henderson recommends that the

spacing enable matching of holes between structural elements such that there is no projection of material from the connected edges (page 3, column 2, lines 28-41). The spacing between spacer plates is shown wide enough to permit hands of a worker therebetween for fastening or welding the spacers to the angle elements (Figures 4, 7, 10).

While Henderson does not specify the relative spacing between apertures, Meyers discloses channel shaped structural members (Figure 7) and angle clips (Figure 5) for forming steel frames in buildings, bridges, and the like. Two rows of apertures are formed on the back wall, and a single row of apertures is formed on each side wall. The pitch between adjacent apertures is a value "X", and the distance of the end apertures to the lateral edges is " $\frac{1}{2} X$ " (see dimensions in Figure 7). In view of Meyers, it would have been obvious for one of ordinary skill in the art at the time the invention was made to punch Henderson's apertures such that the distance of the end apertures to the lateral edge is half the distance between adjacent apertures, as such spacing insures that the pitch between apertures remains constant on structural members connected end to end, and Henderson is concerned with insuring abutting engaging between members (column 5, lines 8-13).

Claim 3:

Henderson teaches the spacer is a plate (3, Figure 4).

Claims 1 and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 2,936,051 to Martin.

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Claim 1:

Martin discloses a structural component having at least five substantially planar faces, the component comprising two identical, elongated angle-sectioned elements (20, Figure 8) forming three planar faces and two end plates (50, Figure 8 and shown in Figure 1) forming two planar faces, totaling five planar faces. While there are more faces shown by Martin, claim 1 does not limit the number of faces to only five.

A plurality of spacers (46, Figure 8) extend between angle-sectioned elements and are welded (column 2, lines 40-48) to coplanar side flanges of the angle-sectioned elements. The spacer openings are clearly wide enough to permit a worker's hand therebetween for welding of the spacer to the angle members (Figure 6). The edge and side faces of the angle-sectioned elements and the end plates are punched with apertures to accommodate fastening means. While Martin does not specify the relative spacing between apertures in the specification, the spacing on the angle members and end cap is illustrated in Figures 6-8 such that the aperture closest to the end of the angle member is half the pitch of internal apertures. Similarly on the end cap (50), the corner apertures are half the pitch of the other apertures.

Claim 6:

Martin discloses a fabricated structural component having six substantially planar faces, formed by four angle members making four faces and two end plates making two faces. Six rectangular prisms, each with six faces, are shown in Figure 1. The spacer means (46) are such that the distance between the center lines of the rows of holes in

each corresponding edge faces is a whole number multiple of the pitch distance (best shown in Figure 9, along the end cap).

Claim 7:

Martin's spacer is shown as a cross brace (80, Figure 9).

Claim 8:

Martin's end faces are merged as a single end face (50, Figure 8).

Claims 3 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 2,936,051 to Martin in view of US Patent 2,114,901 to Henderson.

Claim 3:

While Martin teaches a zig-zag spacer (46) welded between angle members, Martin fails to teach that the spacer is a plate. However, spacer plates are well known in structural framework. For example, Henderson teaches a structural steel member with angle members connected by spacer plates (3, Figure 4). It would have been a matter of obvious design choice for one of ordinary skill in the art at the time the invention was made to form Martin's spacers as plates as opposed to zig-zag members, as Martin is concerned with forming structural members of high strength (column 1, lines 25-29).

Claim 10:

Martin discloses a fabricated structural component having six substantially planar faces, formed by four angle members making four faces and two end plates making two faces. Six rectangular prisms, each with six faces, are shown in Figure 1. The spacer means (46) are such that the distance between the center lines of the rows of holes in

each corresponding edge faces is a whole number multiple of the pitch distance (best shown in Figure 9, along the end cap).

FINAL ACTION

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Naoko Slack whose telephone number is (703) 305-0315. The examiner can normally be reached on Mon-Fri (6:00 am-2:30pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl D. Friedman can be reached on (703) 308-0839. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.



NS



Carl D. Friedman
Supervisory Patent Examiner
Group 3600